



COUNTY OF SAN DIEGO
Great Government Through the General Management System – Quality, Timeliness, Value
DEPARTMENT OF HUMAN RESOURCES

CLASS SPECIFICATION

CLASSIFIED

TELECOMMUNICATIONS TECHNICIAN TRAINEE	Class No. 006152
TELECOMMUNICATIONS TECHNICIAN I	Class No. 006151
TELECOMMUNICATIONS TECHNICIAN II	Class No. 006150
TELECOMMUNICATIONS TECHNICIAN III	Class No. 006149
TELECOMMUNICATIONS TECHNICIAN IV	Class No. 006148

■ CLASSIFICATION PURPOSE

To perform installations, maintenance, diagnoses, construction, and services to a variety of telecommunications equipment to include large public safety land mobile and microwave systems; and to perform related work as required.

■ DISTINGUISHING CHARACTERISTICS

Positions allocated to these classifications are found in the Sheriff's Department's Wireless Services Division.

Telecommunications Technician Trainee:

This is the trainee class of the series. Under immediate supervision, incumbents assist in the installation of telecommunication equipment. As incumbents gain experience, they are assigned work of greater difficulty with less direct supervision.

Telecommunications Technician I:

This is the first working-level class of the series. Incumbents perform progressively responsible duties on prescribed equipment. Under direct supervision, this class installs, and services land mobile and microwave transmitter and receiver systems; incumbents may perform routine work independently.

Telecommunications Technician II:

This is the journey-level class of the series. Under general supervision, the Telecommunications Technician II installs, maintains, diagnoses, and services land mobile and microwave transmitter and receiver systems.

Telecommunications Technician III:

This is the lead-level class of the series. Under general supervision, the Telecommunications Technician III performs highly technical and specialized duties in the installation and maintenance of complex electronic systems.

Telecommunications Technician IV:

This is the supervisory-level class of the series. Under the direction of the Assistant Communication Systems Manager, the Telecommunications Technician IV has full supervisory responsibilities for the Radio/Electronics Unit or the Microwave/Fixed Equipment Unit, and directs and coordinates staff performing the most technically difficult tasks in these operations.

■ FUNCTIONS

The examples of functions listed in the class specifications are representative but not necessarily exhaustive or descriptive of any one position in the classes. Management is not precluded from assigning other related functions not listed herein if such duties are a logical assignment for the position.

Telecommunications Technician Trainee, I and II

Essential Functions:

1. Using precision instruments, assembles, installs, removes, tests, maintains, and repairs amplitude and frequency modulated land mobile, microwave, and antenna/cavity systems.
2. Adjusts radio and microwave equipment for effective and legal operation.

3. Interprets the laws, rules and regulations of the Federal Communications Commission relating to radio and microwave systems used in the public safety service.
4. Provides responsive, high quality service to County employees, representatives of outside agencies and members of the public by providing accurate, complete and up-to-date information, in a courteous, efficient and timely manner.

Telecommunications Technician III

Essential Functions:

1. Leads a crew of Telecommunications Technicians.
2. Performs electronic equipment research, development and fabrication of electronic circuits and equipment which cannot be reasonably obtained from industry.
3. Performs field tests to determine interruptions and interference.
4. Tests solid state miniaturized and integrated circuits, and other components.
5. Isolates and corrects defects or replaces parts; instructs others in the operation of equipment and provides training for other technicians and assistants.
6. Evaluates and recommends the purchase of new equipment.
7. Maintains records of required FCC measurements, work schedules, and completion reports.
8. Provides responsive, high quality service to County employees, representatives of outside agencies and members of the public by providing accurate, complete and up-to-date information, in a courteous, efficient and timely manner.

Telecommunications Technician IV

Essential Functions:

All the functions listed above and

1. Supervises the telecommunications support staff.
2. Prepares labor and material estimates.
3. Manages parts and supplies inventory.
4. Logs FCC required measurements, estimates, and job/project costs.
5. Provides FCC licensing information.
6. Designs complex telecommunications systems.
7. Interacts with other departments and agencies to provide needed telecommunications services.
8. Rates performance of subordinates.
9. Prepares various reports on operations, materials, and equipment.

■ KNOWLEDGE, SKILLS AND ABILITIES

Knowledge of:

The following apply to all classes:

- Principles, techniques and theory of radio telecommunication, safety procedures applicable to handling electronic energy, test equipment, and tools used in installing, servicing, and repairing various electronic equipment.
- Basic writing.
- Report format, preparation, and record keeping.
- Basic electronics.
- County customer service objectives and strategies.

Telecommunications Technician II, III and IV (in addition to the above):

- Federal Communications Commission Rules and Regulations pertinent to Safety and Special Telecommunications systems.

- Digital and logic circuitry used in computers.
- Microwave and radio communication systems, including multi-transmitter/receiver and antennae.
- State-of-the-art telephone network equipment.
- Principles of supervision and training.
- Modifying communication equipment to meet specific county requirements.
- Antennae and coupler configurations.
- Basic alarm and control circuits.

Skills and Abilities to:

The following apply to all classes:

- Assist in the installation and repair of telecommunications equipment.
- Use complex and specialized electronic testing equipment.
- Record time and log sheets: vehicle number, serial number, data installed and removed, nature of work, and other information required to complete the records.
- Analyze situations accurately and take effective action.
- Carry out written and verbal directions and communicate technical ideas and concepts to others.
- Communicate effectively orally and in writing.
- Establish effective working relationships with management, employees, employee representatives and the public representing diverse cultures and backgrounds.
- Treat County employees, representatives of outside agencies and members of the public with courtesy and respect.
- Assess the customer's immediate needs and ensure customer's receipt of needed services through personal service or referral.
- Exercise appropriate judgment in answering questions and releasing information; analyze and project consequences of decisions and/or recommendations.

Telecommunications Technician II (in addition to the above):

- Detect and repair defects in microwave radio circuits and related equipment.
- Make minor modifications to communications equipment to meet specific county requirement.

Telecommunications Technician III (in addition to the above):

- Train and lead others.
- Provide technical advice in the design, installation, maintenance, repair, modification and fabrication of electronic equipment.
- Read and interpret complex schematic diagrams.

Telecommunications Technician IV (in addition to the above):

- Assign and organize and crew of telecommunications technicians.
- Design telecommunications systems and estimate costs to implement these systems.
- Write technical reports, memoranda, and related correspondence in a concise, logical, and grammatically correct format.

■ EDUCATION/EXPERIENCE

Education, training, and/or experience that demonstrate possession of the knowledge, skills and abilities listed above. Examples of qualifying education/experience are:

Telecommunications Technician Trainee:

1. Completion of a certified vocational trade school program in telecommunications, electronics, or a related field; OR,
2. One (1) year of experience installation of mobile radios, radars, or other basic electronic systems.

Telecommunications Technician I:

1. One (1) year of experience installing relatively complex electronic telecommunication equipment for mobile radios, microwave, or other relatively complex electronic systems, AND:
 - a. An additional year of telecommunications experience, OR
 - b. An Associate of Arts degree or higher in telecommunications, electronics, or a related field, OR
 - c. Military certification equivalent to an AA degree or higher in telecommunications, electronics or a related field; OR,
2. One (1) year experience as a Telecommunications Technician Trainee with the County of San Diego, or an equivalent combination of the above.

Telecommunication Technician II:

1. Three (3) years of experience in maintaining, repairing, modifying or testing electronic telecommunications equipment, two (2) years of which must have been with VHF, UHF, SHF (microwave) two-way radio telecommunications equipment, AND:
 - a. An additional year of telecommunications experience, OR
 - b. An Associate of Arts degree or higher in telecommunications, electronics, or a related field, OR
 - c. Military certification equivalent to an AA degree or higher in telecommunications, electronics or a related field; OR,
2. Two (2) years of experience as a Telecommunications Technician I with the County of San Diego, or an equivalent combination of the above.

Telecommunications Technician III:

1. Four (4) years of progressively responsible and extensive experience in electronic or telecommunications equipment maintenance work; OR,
2. Two (2) years experience as a Telecommunications Technician II with the County of San Diego, or an equivalent combination of the above.

Telecommunications Technician IV:

1. Six (6) years of progressively responsible experience in the installation, maintenance, and repair of electronic or telecommunications networks and equipment, and responsibilities for supervision and/or management of personnel engaged in such work; OR,
2. Two (2) years of experience as a Telecommunications Technician III with the County of San Diego, or an equivalent combination of the above.

Note: Additional years of experience as described above may substitute for the education requirement on a year-for-year basis; OR, completion of appropriate course work from an accredited college or university may substitute for the experience requirement on a year-for-year basis.

■ ESSENTIAL PHYSICAL CHARACTERISTICS

The physical characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of the classifications. Reasonable accommodation may be made to enable an individual with qualified disabilities to perform the essential functions of a job, on a case-by-case basis.

Continuous upward and downward flexion of the neck. Frequent: standing, repetitive use of hands to operate telecommunications and testing equipment. Occasional: climbing, sitting, walking, bending and twisting of neck, bending and twisting of waist, squatting, grasping, reaching above and below shoulder level, and lifting and carrying of equipment weighing up to 50 pounds and occasionally up to 70 pounds.

■ SPECIAL NOTES, LICENSES, OR REQUIREMENTS

License

A valid California class C driver's license, which must be maintained throughout employment in this class, is required at time of appointment, or the ability to arrange necessary and timely transportation for field travel. Employees in this class may be required to use their own vehicle.

Certification/Registration

Telecommunications Technician Trainee and I:

None required.

Telecommunications Technician II, III, and IV:

Must possess a valid Federal Communications Commission General Radiotelephone Operator License or equivalent certificate within six (6) months of appointment. Examples of equivalent certificates are: an Associated Public Safety Communications Officer (APCO) Certificate, National Association of Business and Education Radio (NABER) Certificate.

Physical Requirements

Must be able to pass eye color test and have full use of arms, hands, and legs. Must be able to lift up to 50 pounds, and occasionally up to 70 pounds. Must be able to work from high places such as antenna towers and other places that require climbing or crawling to reach.

Working Conditions

Exposure to high frequency noise and radio-frequency radiation including microwave radiation; exposure to noxious fumes; exposure to high voltage; working from antenna towers, ceilings, and other remote places; exposure to hot soldering irons; exposure to adverse weather conditions. These positions are subject to emergency call on a 24-hour basis.

Background Investigation

Must have a reputation for honesty and trustworthiness. Misdemeanor and/or felony convictions may be disqualifying depending on type, number, severity, and recency. Prior to appointment, candidates will be subject to a background investigation.

Probationary Period

Incumbents appointed to permanent positions in this class shall serve a probationary period of 6 months (Civil Service Rule 4.2.5).

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Telecommunications Technician IV (Class No. 006148)	Union Code: CR	Variable Entry: Y